

## LHCf : Very forward measurement at LHC p-p and p-Pb

*Monday 25 August 2014 14:40 (20 minutes)*

The LHCf experiment is one of the forward experiments at the LHC. The purpose is to provide critical calibration data for hadronic interaction model which are used for MC simulations of air shower generated by very high energy cosmic-rays. The LHCf has two independent detectors which are installed at  $\pm 140\text{m}$  from a LHC interaction point, IP1. The detectors are sampling and imaging calorimeters and the rapidity coverage is  $> 8.4$ . The LHCf had operations at 0.9 and 7 TeV p-p collisions in 2010 and at p-Pb collisions in 2013. Recently we are publishing the result of forward neutron spectra at 7TeV p-p collisions and the result of forward neutral pion spectra at 5 TeV p-Pb collisions. The nuclear modification factor of the forward neutral pions at p-Pb is considerably small and about 0.1. The results are compared with predictions of hadronic interaction models.

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**Session Classification:** Nuclear and particle astrophysics

**Track Classification:** 5) Nuclear and particle astrophysics